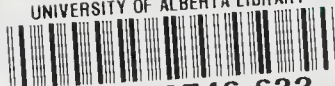


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Forest Resources

of the

Pasquia - Porcupine Area of Saskatchewan

by

J. M. ATKINSON and

M. N. PALLEY

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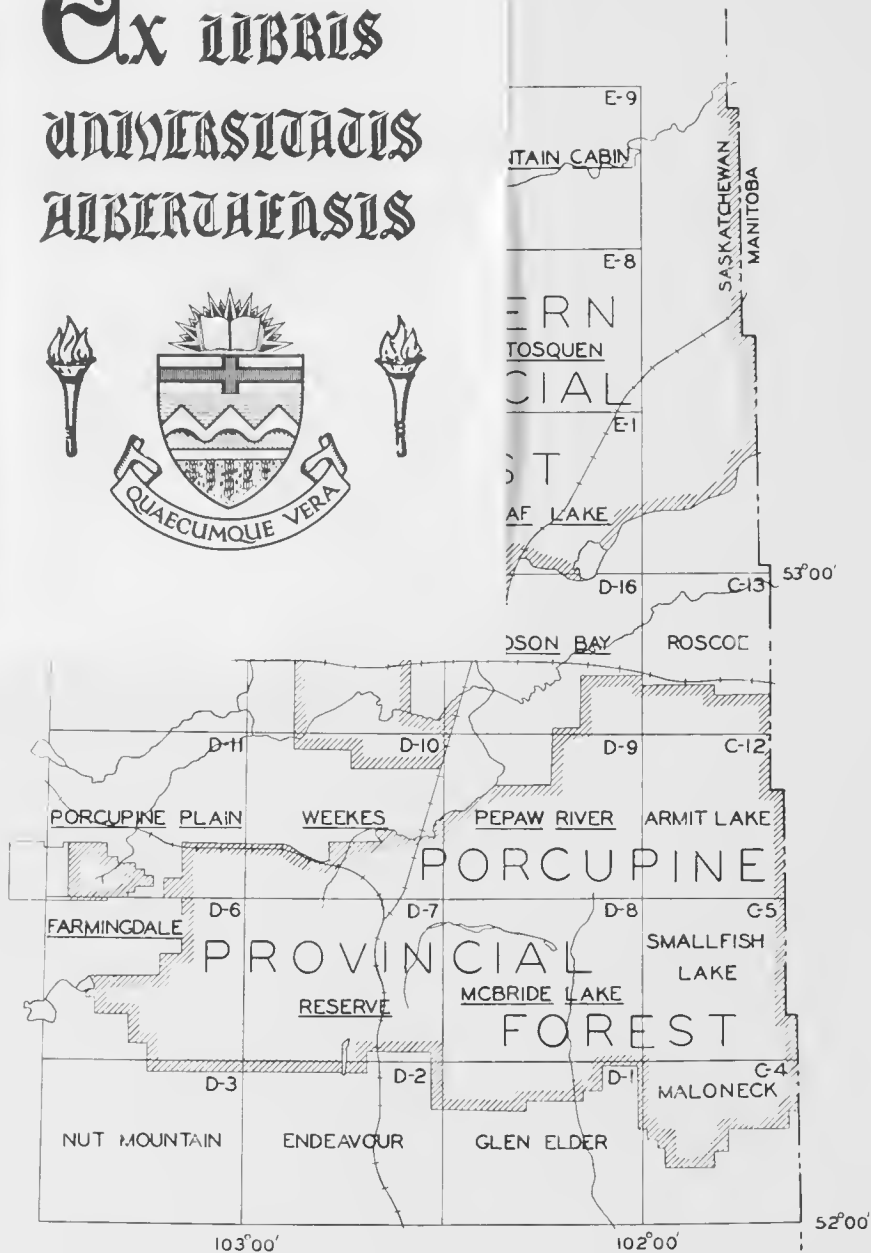
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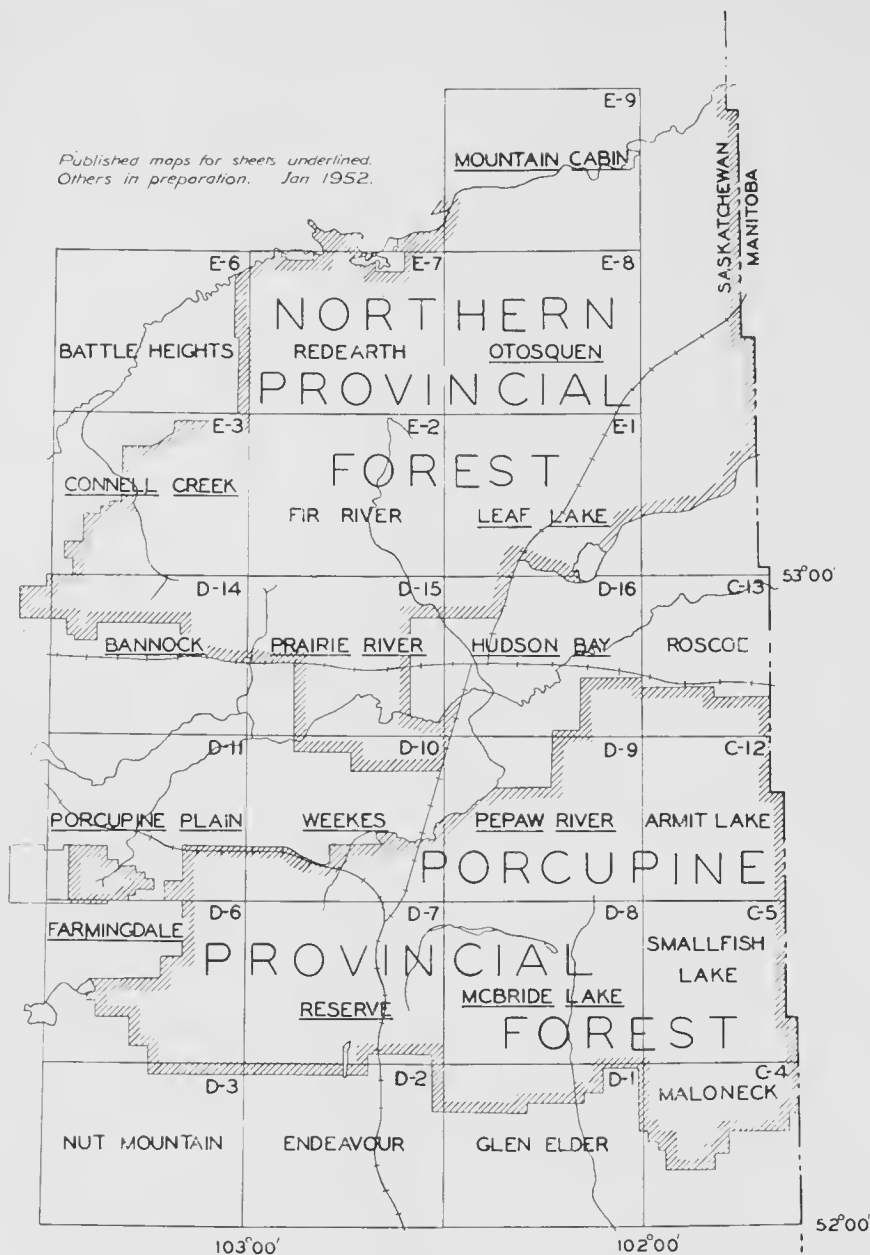
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INDEX TO MAP SHEETS PASQUIA-PORCUPINE AREA

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FOREST RESOURCES OF THE
PASQUIA - PORCUPINE AREA
OF SASKATCHEWAN

By

J. M. Atkinson and M. N. Palley

Forest Inventory Series

Report No. 1

DEPARTMENT OF NATURAL RESOURCES
PROVINCE OF SASKATCHEWAN
1952

Hon. J. H. Brockelbank
Minister

C. A. L. Hogg
Deputy Minister

E. J. Marshall
Director of Forests

REVISED EDITION, 1954

Prepared by Forest Inventory Division

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PHOTO CREDITS

Thanks are extended to the following individuals and organizations for photographs used in this report:

Hamjea Plywood Ltd., The Pas Lumber Co. Ltd., The Caterpillar Tractor Co., A. O. Aschim, A. Kabzems, C. A. Otterbein and the Surveys Branch, Saskatchewan Department of Natural Resources.

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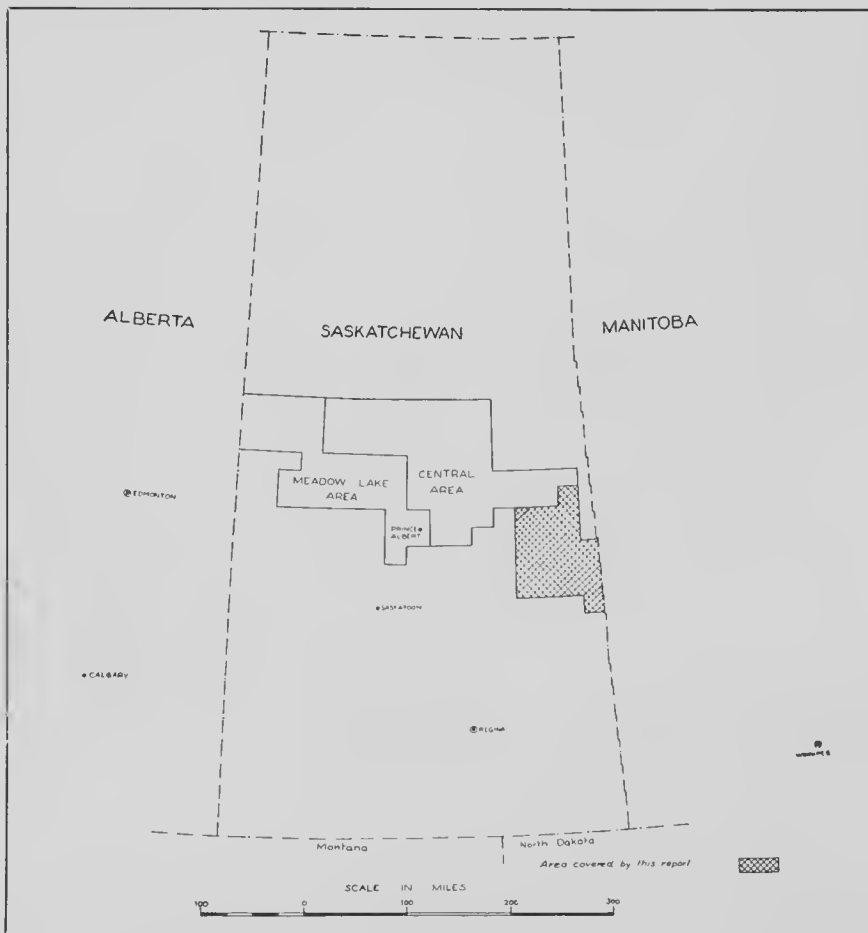
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THE SASKATCHEWAN FOREST INVENTORY

In fulfillment of a recommendation of the Saskatchewan Royal Commission on Forestry of 1947 an inventory of forest land and timber growing stock is being carried out by the Forestry Branch, Department of natural Resources, with financial aid since 1951 from the Dominion Government under The Canada Forestry Act.

This publication illustrates one phase of the work of the Forest Inventory Project — securing the basic forest statistics. These statistics arise out of field sampling of areas previously classified on air photographs. Forestry maps published in four colors represent a second phase of the activities of the Inventory. Twenty-six such map sheets have been issued to date. The rate of growth of Saskatchewan's forests is also being investigated, as still another phase of the Forest Inventory.

The Pasquia-Porcupine area is the first of three areas to be surveyed. Estimates of productive forest land and merchantable timber are presented only for land in Provincial Forests. Reports on the Central and Meadow Lake areas are planned at a later date. Following completion of these three statistical reports, a more comprehensive report on the forest situation in Saskatchewan, including information on growth, drain and problems of utilization will be published.



Location of Survey Areas — Fig. 1.

THE PASQUIA AND PORCUPINE HILLS

Although the hills rise 1700 feet above the surrounding country, rough terrain is limited to their steeply rising northeast slopes. The lower slopes rise in broad terraces which have made possible easy access for logging. The tops are broad plateaus with few sharply defined ridges or summits.

Railways serving the area are shown on the key map inside the front cover. Logging and fire protection roads form the basis for a system of road transportation to rail. Difficulties of road-building are not serious in most parts of the Hills.

A typical view of the country from a lookout tower in the Pasquia Hills is illustrated in Figure 2.



Fig. 2.

LUMBERING IN THE PASQUIA-PORCUPINE AREA

White spruce sawlogs like those pictured here in the yard of the largest mill in the area have been produced commercially since the early years of this century. Most of the old-growth timber areas have now been cut over. Stands like the one in the background of the photo are nearing the stage when a second cut would be practicable.

White spruce is a fine softwood timber species in Saskatchewan, as this photograph suggests, attaining diameters of two feet and rarely four feet, and heights up to 120 feet.



Fig. 3.

SPRUCE PULPWOOD

Black spruce pulpwood stands occur both at lower and higher levels in the Pasquia and Porcupine Hills. Some of the best stands are found adjacent to the post-glacial beach lines, a characteristic type of low ridge in the area, and along the margins of the non-productive swamps. On the tops excellent stands are also found in places where drainage conditions are favorable.

Pulpwood has been cut in Saskatchewan for export to mills in Eastern Canada and the Lake States since 1937. In the 1950-51 fiscal year production of pulpwood off crown lands in the Pasquia-Porcupine area amounted to some 70,000 cords. A view of a pulpwood operation in a dense stand of spruce is shown in Figure 4.



Fig. 4.

WHAT ARE THE HARDWOOD STANDS LIKE?

The preponderance of hardwood cover types and of hardwood volume in the Pasquia-Porcupine area is the burden of this report. The utilization of these hardwoods is at the heart of the forestry problem of this district.



Fig. 5.



Fig. 6.

Some idea of the old growth areas of poplar and white birch can be gained from Figure 5, where the mixture has been sweetened by enough big spruce like the one being skidded out with a D-7 cat to bring about the logging of the area for spruce—but not for the hardwoods. On large portions of the hills the stands are nearly pure hardwoods.

Younger stands of poplar, like the one pictured in Figure 6, often act as nurse crops for white spruce, which starts under their shade and ultimately comes out through the canopy and takes over a dominant position in the stand.

POPLAR UTILIZATION ON THE INCREASE

Poplar plywood produced in the area has found a ready market. Besides the original plywood plant at the town of Hudson Bay at least one other plant is being planned.

The type of material available for the rotary-cut veneer is illustrated in Figure 7 where a tree is being bucked into four-foot bolts with a chain saw. Figure 8 shows glue being applied to the sheets of veneer inside the plywood plant.

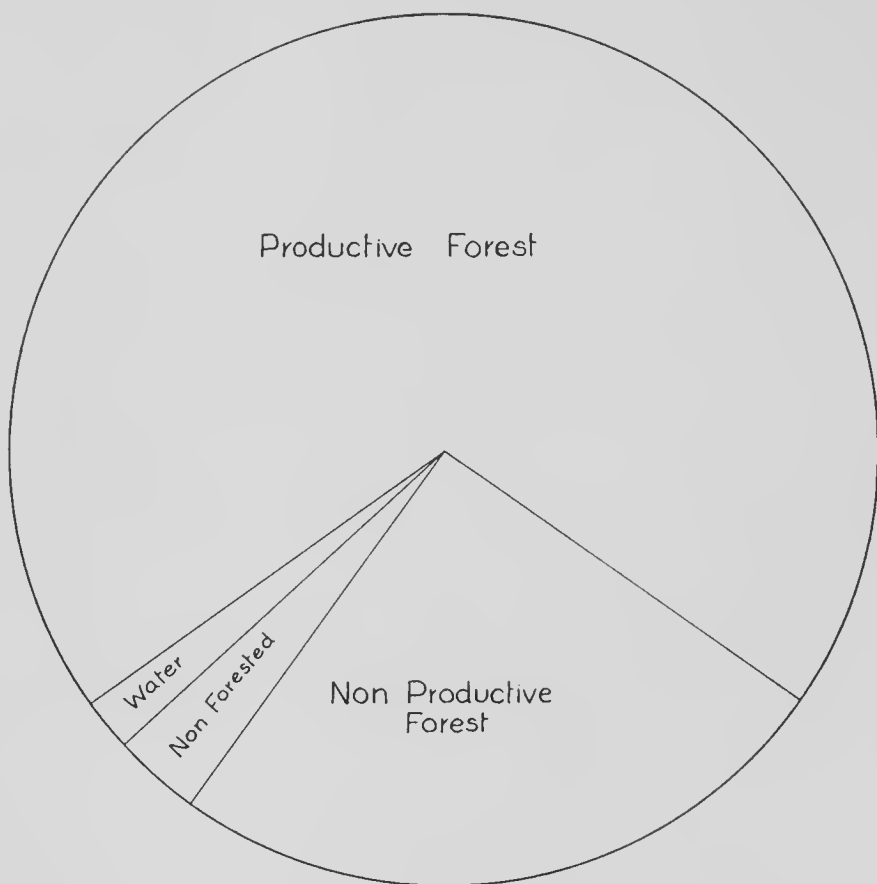
Production of poplar and birch lumber for local use was estimated in a recent year at 6 million board feet. There has also been a small amount of poplar pulpwood cut for shipment to distant mills.



Fig. 7.



Fig. 8.



Area Distribution

(Source — Table 1)

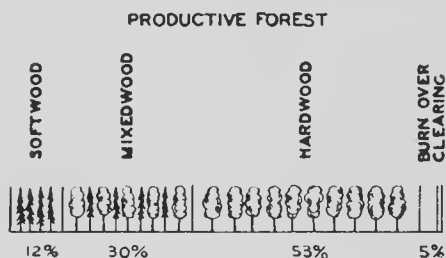
FOREST AREA

Provincial Forests in the Pasquia-Porcupine area as here presented occupy slightly more than three million acres of land, including that covered by water. Of this total area 2,125,150 acres are rated as productive forest land, 69.5% of the total. The remainder is made up of non-productive forest, 25.2%, non-forested land, 3.3%, and water, 2.0%.

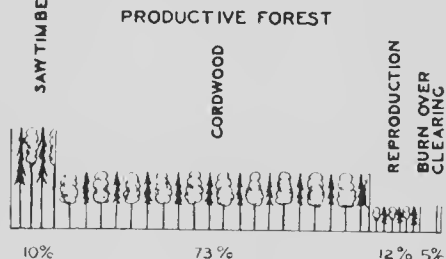
Stands of cordwood size occupy over 1.5 million acres of productive forest land. Both sawtimber areas and reproduction areas are deficient, with 206,000 acres. of the productive area in sawtimber and 258,000 acres in reproduction.

Hardwood cover types predominate, as may be visualized by referring to the colored type map inside the back cover of this report. More than half the total productive forest area, 1.1 million acres, falls in the hardwood cover type. The mixedwood type is represented by some 628,000 acres. As regards sawtimber stands alone, more of the sawtimber area (111,000 acres) is in mixed stands than in the hardwood stands (76,000 acres).

AREA DISTRIBUTION BY COVER TYPE

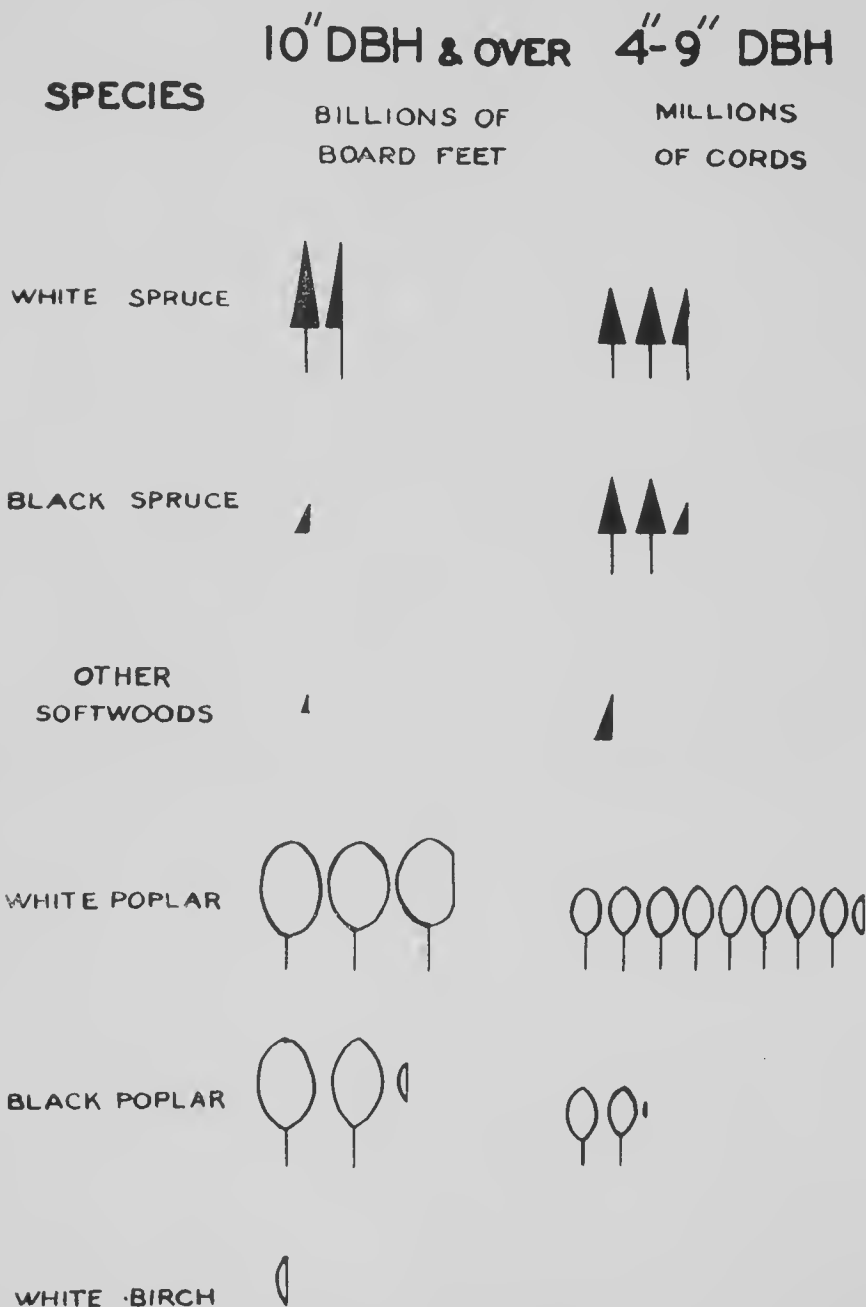


AREA DISTRIBUTION BY SIZE CLASS



(Source - Table 2)
Fig. 10.

VOLUME BY SPECIES AND TREE SIZE CLASS



(Source - Tables 4 and 5)

Fig. 11.

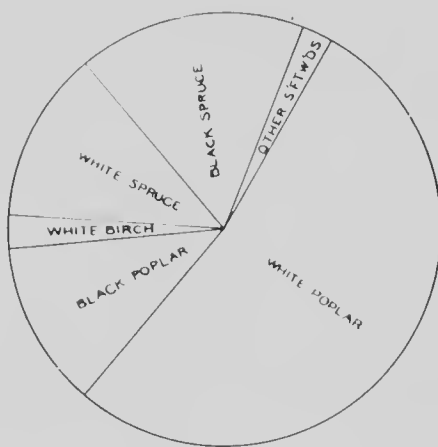
TIMBER VOLUMES

Merchantable Cubic Foot Volume

On the basis of cubic foot volume there is slightly more wood, 1.3 billion cubic feet, in the smaller material class (4-9 inches D.B.H.) than in the sawtimber class (10 inches D.B.H. and over) which contains 1.2 billion cubic feet. Hardwoods, amounting to 1.8 billion cubic feet, constitute 70% of the total stand, as compared with 775 million cubic feet of softwoods. White and black poplar constitute 66.3% of all merchantable volume. White and black spruce, the best represented softwoods in the area, make up 27.8% of the total merchantable volume.

Cordwood

Volume of smaller material in trees four to nine inches D.B.H. are two-thirds hardwoods and one-third softwoods. Of a total of 15.9 million cords of material in this class, 10.3 million cords are poplar and 4.7 million cords are spruce. White spruce and black spruce are nearly equally represented, whereas white poplar cordwood is four times as plentiful as black poplar.



CORDWOOD VOLUME

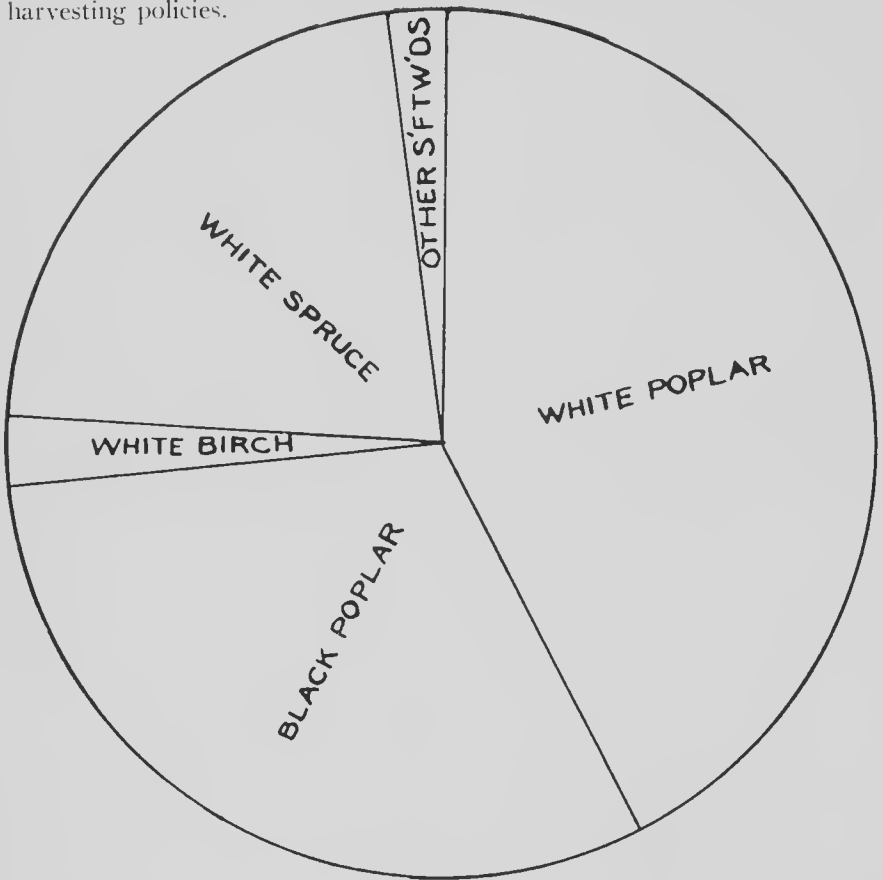
(Source - Table 5)

Fig. 12.

SAWTIMBER

Sawtimber volume also shows the same preponderance of hardwoods, with over 5 billion board feet of white and black poplar as compared with 1.8 billion board feet of softwoods. Only 30.9% of the sawtimber volume comes from sawtimber areas, stands over seventy feet in height, while the remaining 69.1% comes from cordwood areas. White birch amounted to 202 million board feet or 2.9% of the total sawtimber stand.

White spruce sawtimber, to date the most important forest product of the region, is estimated at 1.5 billion board feet. Of this total stand 853 million board feet are found on sawtimber areas. If only trees 14 inches D.B.H. and over are included this volume is further reduced to 550 million board feet. Not all this volume is available for cutting. Some of it occurs in such scattered stands that it is uneconomic to harvest. Much of it is in fast-growing trees which will not be marked for removal in a first cut. This example indicates some of the factors which must be taken into account in translating the results of this total wood inventory into practical harvesting policies.



SAWTIMBER VOLUME

(Source - Table 4)

Fig. 13.

Table 1 — Land Classification in the Pasquia-Porcupine Area: 1950
(In Acres)

Unit of area	Amount	Per cent of Provincial Forest Area
TOTAL AREA	5,077,140	
Provincial Forests, total	3,054,754	100.0
Land:		
Productive forest	2,125,150	69.5
Non-productive forest	769,030	25.2
Non-forested	100,079	3.3
Water	60,495	2.0
All other area, total†	2,022 386	

† Includes 9,067 acres of Provincial Park and 5,918 acres of Indian Reserve land.

Table 2 — Areas of productive forest land in Provincial Forests of the Pasquia-Porcupine Area, by cover types and stand-size classes: 1950
(In Acres)

Cover type	TOTAL		STAND — SIZE CLASS		
	Amount	Per cent*	Sawtimber	Cordwood	Reproduction
Softwood	255,945	12.0	17,844	235,333	2,768
Mixedwood	628,546	29.6	111,555	424,724	92,267
Hardwood	1,121,138	52.8	76,560	881,525	163,053
All Cover types	2,005,629		205,959	1,541,582	258,088
Per cent*			9.7	72.6	12.1

* In addition there are Burn-over — 115,276 acres (5.4%) and Clearing — 4,245 acres (0.2%).

Table 3 — Land Classification of the Pasquia-Porcupine Area by map sheets: 1950

(In Acres)

Map Sheet*	Total area	Area in Provincial Forest						
		Amount in Provincial Forests	Per cent of total	Total	Per cent [†] Productive	Productive Forest Area SoftwoodMixedwoodHardwood		
Maloneck 63 c/4	184,229	92,737	50.3	62,810	82.8	2,168	28,976	31,666
Smallfish Lake 63 c/5	173,720	173,720	100.0	108,535	62.5	17,169	33,657	57,709
Armit Lake 63c/12	163,822	163,822	100.0	130,896	80.1	52,673	46,675	31,548
Roscoe 63c/13	152,312	38,088	25.0	23,395	63.9	6,800	9,586	7,009
Glen Elder 63 d/1	235,386	51,852	22.0	40,974	79.9	632	7,048	33,294
Endeavour 63 d/2	235,386	10,841	4.6	7,462	68.8	133	2,262	5,067
Nut Mountain 63 d/3	235,386	8,690	3.7	7,120	81.9		314	6,806
Farmingdale 63 d/6	234,074	117,170	50.0	88,436	78.3	387	13,006	75,043
Reserve 63 d/7	234,074	230,766	98.6	181,127	79.1	12,489	50,816	117,831
McBride Lake 63 d/8	234,074	234,074	100.0	146,958	62.9	14,064	52,851	80,043
Pepaw River 63 d/9	232,754	184,336	79.2	148,760	87.6	8,829	49,103	90,828
Weekes 63d/10	232,754	105,470	45.3	82,364	90.0	3,416	30,950	47,998
Porcupine Plain 63d/11	232,754	46,853	20.1	35,479	89.7	339	5,680	29,460
Bannock 63d/14	231,412	87,228	37.7	59,233	73.6	3,370	17,395	38,468
Prairie River 63d/15	231,412	181,161	78.3	122,744	75.6	8,494	32,642	81,608
Hudson Bay 63d/16	231,412	51,333	22.2	26,700	60.9	929	13,223	12,548
Leaf Lake 63 e/1	229,435	209,701	91.4	114,301	56.3	18,750	52,620	42,931
Fir River 63 e/2	229,435	229,435	100.0	85,935	39.8	25,692	22,758	37,485
Connell Creek 63 e/3	229,435	150,893	65.8	102,978	83.8	4,413	22,958	75,607
Battle Heights 63 e/6	228,802	12,120	5.3	7,693	96.7	458	3,254	3,981
Redearth 63 e/7	228,802	218,194	95.0	173,448	80.1	27,350	60,250	85,848
Otosquen 63 e/8	228,802	228,802	100.0	127,597	57.8	26,785	55,976	44,836
Mountain Cabin 63 e/9	227,468	227,468	100.0	120,684	53.2	20,614	16,546	83,524
TOTAL AREA	5,077,140	3,054,754		2,005,629	69.6	255,945	628,546	1,121,138

* Numbers refer to National Topographic Series classification.

† Burn-over of 115,276 acres (3.8%) and Clearing of 4,245 acres (0.1%) are distributed among the map sheets and included in per cent productive figures.

**Table 4 — Sawtimber volume by species and stand-size classes in
Provincial Forests of the Pasquia-Porcupine Area: 1950**

(In thousands of board feet)

Species	All areas		Sawtimber area	Cordwood area
	Amount	Per Cent		
TOTAL SAWTIMBER	7,131,931	100.0	2,208,121	4,923,810
Softwoods, total	1,756,179	24.6	924,037	832,142
White spruce	1,535,857	21.5	853,228	682,629
Black spruce	121,969	1.7	45,033	76,936
Jack pine*	31,175	.5	1,736	29,439
Balsam fir	59,824	.8	23,684	36,140
Tamarack	7,354	.1	356	6,998
Hardwoods, total	5,375,752	75.4	1,284,084	4,091,668
White poplar	2,982,997	41.8	699,729	2,283,268
Black poplar*	2,190,632	30.7	551,817	1,638,815
White birch*	202,123	2.9	32,538	169,585

* Gross merchantable volume.

**Table 4A—Sawtimber volume distribution by diameter
groups in the Pasquia - Porcupine Area: 1950**

(In thousands of board feet)

Species	10 inch and Over		10 and 11 inch class	12 and 13 inch class	14 inch and over
	Board Feet	%			
ALL SPECIES	7,131,932 100.0%	100.00	2,074,941 29.09%	1,888,204 26.47%	3,168,787 44.44%
Softwoods, total	1,756,180 100.0%	24.62	506,800 28.85%	385,762 21.97%	863,618 49.18%
White spruce	1,535,858 100.0%	21.54	381,295 24.82%	319,988 20.84%	834,575 54.34%
Black spruce	121,969 100.0%	1.71	75,195 61.65%	32,487 26.63%	14,287 11.72%
Jack pine	31,175 100.0%	.43	19,632 62.97%	10,120 32.46%	1,423 4.57%
Balsam fir	59,824 100.0%	.84	25,359 42.38%	21,982 36.75%	12,483 20.87%
Tamarack	7,354 100.0%	.11	5,319 72.32%	1,185 16.12%	850 11.56%
Hardwoods, total	5,375,752 100.0%	75.37	1,568, 141 29.17%	1,502,442 27.94%	2,305,169 42.89%
White poplar	2,982,997 100.0%	41.83	1,037,428 34.77%	936,772 31.41%	1,008,797 33.82%
Black poplar	2,190,632 100.0%	30.71	478,547 21.84%	500,097 22.83%	1,211,998 55.33%
White birch	202,123 100.0%	2.84	52,166 25.80%	65,573 32.45%	84,384 41.75%

**Table 5 — Cordwood volume by species and stand-size classes in
Provincial Forests of the Pasquia-Porcupine Area: 1950**
(In thousands of cords)

	All Areas		Sawtimber area	Cordwood area	Reproduction area
	Amount	Per Cent			
TOTAL CORDWOOD	15,894	100.0	888	14,618	389
Softwoods, total	5,157	32.4	494	4,488	176
White spruce	2,459	15.5	335	2,107	17
Black spruce	2,284	14.4	109	2,022	153
Jack pine*	114	.7	2	111	1
Balsam fir*	230	1.4	47	179	5
Tamarack	70	.4	1	69	
Hardwoods, total	10,737	67.6	394	10,130	214
White poplar	8,328	52.4	151	7,979	198
Black poplar	2,003	12.6	136	1,852	16
White birch*	405	2.6	106	299	
Manitoba maple	1		1		

* Gross merchantable volume.

**Table 6 — Cubic foot volume by species and tree diameter groups in
Provincial Forests of the Pasquia-Porcupine Area: 1950**
(In thousands of cubic feet)

Species	All diameters		Diameter groups - inches	
	Amount	Per Cent	4 - 9	10 and over
ALL SPECIES	2,585,642	100.0	1,350,453	1,235,189
Softwoods, total	775,007	30.0	437,750	337,257
White spruce	498,257	19.3	208,982	289,275
Black spruce	219,500	8.5	194,124	25,376
Jack pine*	17,160	.7	9,565	7,595
Balsam fir*	32,185	1.2	18,941	13,244
Tamarack	7,905	.3	6,138	1,767
Hardwoods, total	1,810,635	70.0	912,703	897,932
White poplar	1,241,669	48.0	707,909	533,760
Black poplar	473,648	18.3	170,272	303,376
White birch*	95,215	3.7	34,428	60,787
Green ash	38		38	
Manitoba maple	65		55	9

* Gross merchantable volume.

**Table 6A — The Volume and influence of 4 inch trees
on the volume of 4 - 9 inch class trees
Pasquia-Porcupine Area: 1950
(In thousands of cubic feet)**

Species	Diameter Groups		
	4 to 9 Inches	4 - Inch Class Alone	
		Amount	Per Cent
ALL SPECIES	1,350,359	114,594	8.5
Softwoods, total	437,750	46,018	10.5
White spruce	208,982	13,791	6.6
Black spruce	194,124	28,674	14.8
Jack pine	9,565	678	7.1
Balsam fir	18,941	1,476	7.8
Tamarack	6,138	1,399	22.8
Hardwoods, total	912,609	68,576	7.5
White poplar	707,909	56,222	7.9
Black poplar	170,272	9,271	5.4
White birch	34,428	3,083	9.0

**Table 7 — Average volume per acre by stand-size classes and tree diameter
groups in Provincial Forests of the Pasquia-Porcupine Area: 1950**

Stand- size class	All diameters (cubic feet)	Diameter Group — Inches	
		4 - 9 (cords)	10 and over (board feet)
ALL SIZE CLASSES	1,289	7.9	3,556
Sawtimber	2,166	4.3	10,721
Cordwood	1,366	9.5	3,194
Reproduction	128	1.5	

Table 8 — Volume by Map Sheets in Provincial Forests of the Pasquia-Porcupine Area: 1950

MAP SHEET		Thousands of Board Feet			Thousands of Cords			Thousands of Cubic feet		
		Total	Softwood	Hardwood	Total	Softwood	Hardwood	Total	Softwood	Hardwood
Maloneck	63 c/4	235,900	88,820	147,080	611	131	480	92,431	26,884	65,546
Smallfish Lake	63 c/5	161,676	71,033	90,643	864	417	447	102,431	48,899	53,532
Armit Lake	63c/12	339,592	174,381	185,211	1,394	792	602	189,591	102,701	86,889
Roscoe	63c/13	112,657	30,307	82,350	157	85	72	32,601	12,893	19,709
Glen Elder	63 d/1	129,873	14,638	115,234	414	43	371	57,678	6,386	51,292
Endeavor	63 d/2	13,181	1,807	11,374	64	9	55	7,764	1,105	6,660
Nut Mountain	63 d/3	19,017	590	18,427	69	2	67	9,213	306	8,906
Farmingdale	63 d/6	274,410	31,765	242,645	824	53	770	117,600	10,481	107,118
Reserve	63 d/7	544,699	153,442	391,258	2,129	337	1,792	276,775	57,387	219,388
McBride Lake	63 d/8	633,203	199,026	434,177	1,276	364	912	216,555	66,474	150,081
Pepaw River	63 d/9	475,456	147,083	328,373	1,206	264	942	184,022	49,196	134,825
Weekes	63d/10	365,901	151,384	214,517	768	164	604	128,659	40,809	87,850
Porcupine Plain	63d/11	85,837	18,763	67,074	404	26	379	49,356	5,585	43,771
Bannock	63d/14	196,472	22,689	173,783	260	74	186	54,792	10,531	44,261
Prairie River	63d/15	367,592	51,032	316,560	680	183	497	118,142	25,115	93,028
Hudson Bay	63d/16	61,476	11,394	50,082	92	34	58	18,130	4,985	13,145
Leaf Lake	63 e/1	286,636	70,961	215,674	729	352	377	110,537	42,870	67,668
Fir River	63 e/2	374,410	68,391	306,019	632	383	249	117,278	45,840	71,437
Connell Creek	63 e/3	616,800	61,759	555,041	477	118	359	142,904	21,099	121,805
Battle Heights	63 e/6	28,748	10,744	18,003	34	14	20	7,885	3,113	4,771
Redearth	63 e/7	762,623	174,226	588,397	831	366	464	216,192	70,133	146,059
Otosquen	63 e/8	405,987	112,331	293,657	1,335	632	703	183,268	74,647	108,621
Mountain Cabin	63 e/9	619,785	89,613	530,172	645	315	330	151,840	47,569	104,271
TOTAL		7,131,931	1,756,179	5,375,752	15,894	5,157	10,737	2,585,642	775,007	1,810,635

Table 9—Periodic annual volume increment by species and tree diameter groups in the Pasquia-Porcupine Area: 1952

Species	All Diameters		Diameter Group — Inches	
	Thousands of Cubic Feet	Percent	4 - 9 Inches Thousands of Cords *	10 Inches and Over, Thousands or Board Feet **
ALL SPECIES	57,041	100.0	406.3	112,419
Softwoods, total	12,445	21.8	96.4	21,203
White spruce	6,786	11.9	37.7	17,894
Black spruce	4,390	7.7	47.5	1,751
Jack pine	667	1.1	5.9	836
Balsam fir	440	.8	3.6	649
Tamarack	162	.3	1.7	73
Hardwoods, total	44,596	78.2	309.9	91,216
White poplar	30,965	54.3	250.2	48,478
Black poplar	12,015	21.1	51.2	38,294
White birch	1,575	2.8	8.1	4,444
Elm	10		.1	
Ash	5			
Maple	26		.3	

* Cubic feet converted to cords, basis 85 cubic feet equal to one cord.

** Cubic feet converted to board feet, basis one cubic foot equal to five board feet.

METHODS OF SURVEY

The area estimates given in this report are based on 100 per cent air-photo type-mapping of all land in Provincial Forests in the survey area. Photos used were summer verticals taken in 1945, 1946 and 1949, with a few areas of concentrated logging being re-photographed in the spring and fall of 1951.

Productive forest land was mapped on the basis of softwood, mixed-wood and hardwood types and in four levels of crown density and average height of dominant stand, with additional classes of disturbed stands being recognized.

One-fifth acre sample plots were located at random or along random lines apportioned among all the cover types mapped. There were 586 such plots located and measured from 1949 to 1951. Volume tables were adapted or prepared based on random sample trees, some of which were felled and sectioned to determine tree taper and cull. Average stand volumes were applied to the air-photo cover maps to produce the estimates, which are in terms of net merchantable volume for nearly all species. Thirteen of the map sheets in the area have so far been lithographed in four colours and are available from the Department of Natural Resources at Prince Albert.

ACCURACY OF DATA

Standard errors of the mean cubic foot volumes of all cover types in older age classes (50 feet and over in height) averaged plus or minus 8.7 per cent. This statement means that the estimate of cubic foot volume in these types is within 8.7 per cent of the true volume, two chances out of three, assuming no errors in classification, plot measurements or volume tables. Efforts were made to keep these other sources of error to a minimum. Sampling errors for the younger age classes were somewhat higher.

These sampling errors apply to the estimates for the area as a whole. Those estimates for smaller sub-divisions of the area and for individual species are necessarily less reliable. Their chief utility is in showing relative orders of magnitude, rather than in furnishing reliable quantitative figures.

DEFINITION OF TERMS

Area Classification

Forest Land area

Productive forest — Land which will produce a forest crop of merchantable size and form within a reasonable period of time.

Non-productive forest — Land incapable of producing a forest crop of merchantable size within a reasonable period of time. Includes treed muskegs and a proportion of softwood stands judged to be stagnant.

Non-forested — Includes open swamps, grassland, brush, rock, cultivated land and urban areas.

Stand-size classes

Sawtimber area — Stands over 70 feet in height.

Cordwood area — Stands averaging 30 to 70 feet in height.

Reproduction area — Stands under 30 feet in height.

Cover types

Softwood — Stands containing over 75 per cent softwoods by volume.

Mixedwood — Stands in which neither softwoods nor hardwoods constitute 75 percent of the stand volume.

Hardwood — Stands containing over 75 per cent hardwoods by volume.

Merchantability

Merchantable — Stands over 30 feet in height.

Young growth — Stands on productive forest land under 30 feet in height.

Volume Classification

Sawtimber — Volume contained in trees 9.6 inches and over (diameter breast high) regardless of stand-size class in which they occur, expressed in board feet, International $\frac{1}{4}$ " scale.

Cordwood — Volume of solid wood inside bark contained in trees 3.6 to 9.5 inches in diameter, expressed in standard cords of 128 cubic feet of stacked rough wood.

Cubic foot volume — Volume of solid wood inside bark of all trees 3.6 inches in diameter and over.

Limits of merchantability

For Sawtimber — Stump one foot, variable top diameter inside bark averaging 6 inches.

For Cordwood — Stump one foot, top diameter inside bark 3 inches.

Net merchantable volume — Merchantable volume of sound wood. Deductions for cull based on averaged measurements of felled sample trees. Volumes in this report are net merchantable unless otherwise noted.

Gross merchantable volume — Merchantable volume with no deductions for cull made, in cases where reliable cull factors are not yet available.

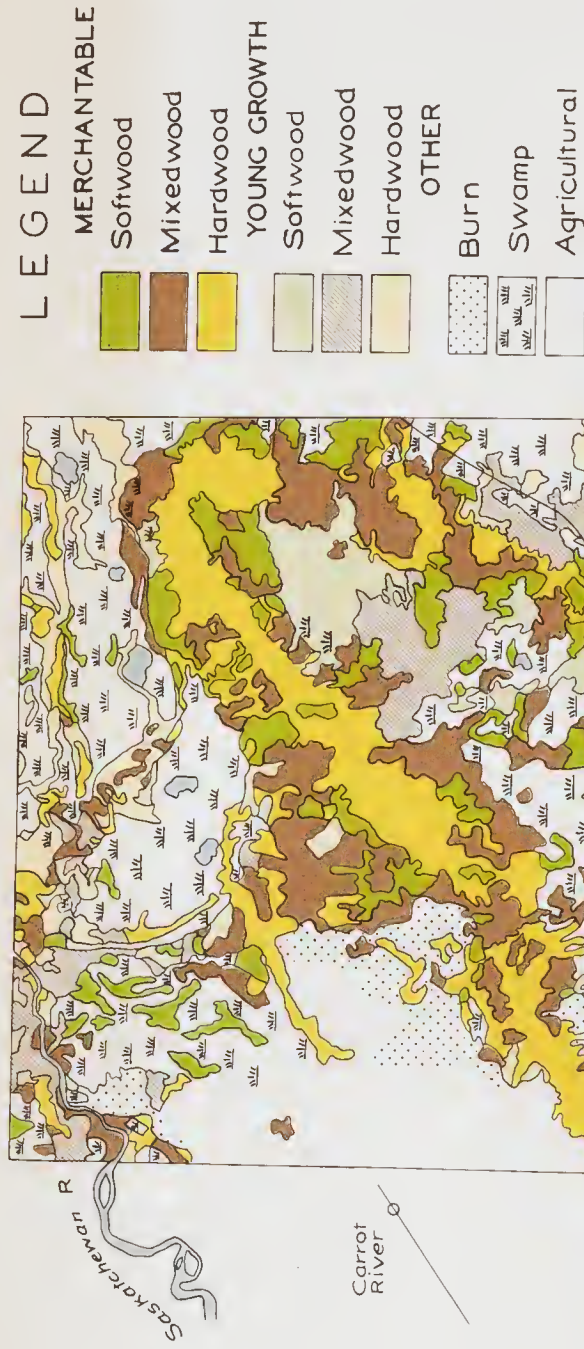
LIST OF SPECIES

Softwoods -

- White spruce — Picea glauca (Moench) Voss.
Black spruce — Picea mariana (Mill.) B.S.P.
Jack pine — Pinus Banksiana Lamb
Balsam fir — Abies balsamea (L.) Mill.
Tamarack — Larix laricina (Du Roi) K. Koch.

Hardwoods -

- White poplar — Populus tremuloides Michx.
Black Poplar — Populus balsamifera L.
White birch — Betula papyrifera Marsh
Green ash — Fraxinus pennsylvanica Marsh.
var. lanccolata (Borkh.) Sarg.
Manitoba maple — Acer Negundo L.
var. interius (Britton) Sarg.



FOREST TYPES OF THE PASQUIA-PORCUPINE AREA

0 25
MILES

1951

SD 2 S25 S252 NO-1 1954
SASKATCHEWAN FOREST INVENTORY
DIVISION
FOREST INVENTORY SERIES
SERIAL M1 39648604 SCI



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DATE DUE SLIP

SD 2 S25 S252 no.1, 1954
Saskatchewan. Forest Inventory
Division.

Forest inventory series
39648604 SCI

ONE WEEK LOAN

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